

## SUPPLEMENTARY MATERIAL

### TABLES

**Table S1. Epidemiological, clinical, echocardiographic and microbiologic characteristics of the cohort and comparison between the two samples**

	Total cohort (n=671)	Derivation sample (n=424)	Validation sample (n=247)	P
Age (years)	61 [14]	62 [14]	60 [14]	0.23
>70	226 (33.7%)	148 (34.9%)	78 (31.7%)	0.44
Male gender	456 (69%)	291 (68.6%)	165 (68.3%)	0.73
Nosocomial acquisition	162 (24.1%)	105 (24.7%)	57 (23.1%)	0.73
Antibiotic prophylaxis	63 (9.4%)	39 (9.2%)	24 (9.7%)	0.89
<b>Comorbidity</b>				
Diabetes	135 (20.1%)	84 (19.8%)	51 (20.6%)	0.54
Chronic renal failure	70 (10.4%)	42 (9.9%)	28 (11.3%)	0.12
Malignant neoplasia	56 (8.3%)	34 (8%)	22 (8.9%)	0.85
COPD	45 (6.7%)	29 (6.8%)	16 (6.5%)	0.55
<b>Location of infection</b>				
Prosthetic left-sided	271 (40.4%)	165 (38.9%)	106 (42.9%)	0.22
Multivalvular	171 (25.5%)	103 (24.3%)	68 (27.5%)	0.36
<b>Echocardiography</b>				
Vegetation detection	537 (80%)	340 (80.2%)	197 (82.1%)	0.40
Vegetation size (mm)	14.3 [8.9]	14.3 [7.6]	14.3 [10.6]	0.97
Periannular complications	212 (31.6%)	131 (30.9%)	81 (32.8%)	0.16
Pulmonary hypertension (moderate-severe)	199 (29.6%)	128 (30.2%)	71 (28.7%)	0.92
LVEF (%)	61 [12]	60.4 [12.5]	62.4 [11.2]	0.11
LVEF < 35%	20 (2.9%)	13 (3.1%)	7 (2.8%)	0.64
<b>Causative microorganism</b>				
<i>S. bovis</i>	31 (4.6%)	18 (4.2%)	13 (5.3%)	0.33
<i>Viridans</i> group strept	85 (12.7%)	55 (13%)	30 (12.1%)	0.81

Enterococci	62 (9.2%)	42 (9.9%)	20 (8.1%)	0.27
<i>S. aureus</i>	108 (16.1%)	74 (17.4%)	34 (13.8%)	0.19
Coagulase-negative staph.	114 (17%)	64 (15.1%)	50 (20.2%)	0.10
Gram-negative bacilli	18 (2.7%)	11 (2.6%)	7 (2.8%)	0.81
Fungi	11 (1.6%)	7 (1.7%)	4 (1.6%)	0.99
Anaerobes	18 (2.7%)	12 (2.8%)	6 (2.4%)	0.99
Polimicrobial	58 (8.6%)	39 (9.2%)	19 (7.7%)	0.85
Negative cultures	95 (14.2%)	57 (13.4%)	38 (15.4%)	0.49

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Values are n (%) or mean [SD]. COPD: chronic obstructive pulmonary disease. LVEF: left ventricle ejection fraction.

**Table S2. Clinical evolution prior to cardiac surgery**

	<b>Total cohort (n=671)</b>	<b>Derivation sample (n=424)</b>	<b>Validation sample (n=247)</b>	<b>P</b>
Acute onset of symptoms (<15 days)	279 (65.8%)	184 (43.4%)	95 (38.5%)	0.21
<b>Clinical events prior to surgery</b>				
Systemic embolisms	180 (26.8%)	119 (28.1%)	61 (25%)	0.42
CNS embolisms	130 (19.4%)	81 (19.1%)	49 (19.8%)	0.84
Heart failure	422 (62.9%)	270 (63.7%)	152 (62.0%)	0.68
Acute renal failure	225 (33.5%)	142 (33.5%)	83 (33.6%)	0.93
Septic shock	71 (10.6%)	45 (10.6%)	26 (10.7%)	0.99
Thrombocytopenia (<150000/mm <sup>3</sup> )	183 (27.3%)	124 (29.2%)	59 (25.2%)	0.17
<b>Surgical data</b>				
Logistic EuroSCORE	26.1 [21]	25.6 [20]	26.9 [23]	0.50
Urgent surgery	343 (51.1%)	217 (51.2%)	126 (51%)	0.99
In-hospital mortality	192 (28.6%)	124 (29.2%)	68 (27.5%)	0.72

Values are n (%) or mean [SD]. CNS: central nervous system.

Table S3. Predicted mortality according to the scoring obtained with the RISK-E score

Total RISK-E score	Predicted mortality (%)
0	3.36
5	5.64
6	6.22
7	6.42
9	7.96
10	9.33
11	10.24
12	10.56
13	11.61
14	12.61
15	13.87
16	14.93
17	16.87
18	18.32
19	19.50
20	21.26
21	22.38
22	24.17
23	26.66
24	28.87
25	31.02
26	32.80
27	35.13
28	36.79
29	39.59
30	42.17
31	44.64
32	47.57
33	49.73
34	52.17
35	54.39
36	56.77
37	59.08
38	61.96
39	64.82
40	66.75
41	68.52
42	70.59
43	72.32
44	74.72
45	76.65
46	78.61
47	80.09
48	81.39

49	82.97
50	83.98
51	85.74
52	86.67
53	88.05
54	89.08
55	90.09
56	90.76
57	91.18
58	92.28
59	92.93
60	94.13
61	94.29
62	94.71
63	95.11
67	96.94
68	97.01

**Table S4. Characteristics of patients with surgical indications who did not undergo surgery**

	<b>Discharged alive (n=23)</b>	<b>Deaths (n=74)</b>	<b>P</b>
Age (years)	74 [12]	70 [14]	0.20
>70	19 (82.6%)	48 (64.9%)	0.11
Male gender	12 (52.2%)	47 (63.5%)	0.33
Nosocomial acquisition	11 (47.8%)	35 (47.3%)	0.38
<b>Comorbidity</b>			
Diabetes	10 (43.5%)	26 (35.1%)	0.82
Chronic renal failure	8 (34.8%)	23 (31.1%)	0.12
COPD	2 (8.7%)	11 (14.9%)	0.45
<b>Echocardiographic features</b>			
Prosthetic left-sided	10 (43.5%)	35 (47.3%)	0.75
Multivalvular	5 (21.7%)	15 (20.3%)	0.82
Vegetation detection	22 (95.7%)	69 (93.2%)	0.67
Vegetation size (mm)	8.1 [4.1]	16.1 [10.5]	<b>0.013</b>
Periannular complications	7 (30.4%)	23 (31.1%)	0.95
Pulmonary hypertension (moderate-severe)	8 (34.8%)	38 (51.4%)	0.145
LVEF (%)	60.1 [7.4]	59.5 [14.0]	0.88
LVEF < 35%	0 (0%)	2 (3.9%)	0.70
<b>Causative microorganism</b>			
<i>S. bovis</i>	0 (0%)	2 (2.7%)	0.43
<i>Viridans</i> group streptococci	4 (17.4%)	1 (1.4%)	<b>0.002</b>
Enterococci	4 (17.4%)	11 (14.9%)	0.77
<i>S. aureus</i>	5 (21.7%)	19 (25.7%)	0.70
Coagulase-negative staph.	3 (13.0%)	24 (32.4%)	<b>0.07</b>
Gram-negative bacilli	1 (4.4%)	3 (2.7%)	0.69
Fungi	1 (4.4%)	1 (1.4%)	0.38

Positive blood cultures	7 (30.4%)	33 (44.6%)	0.11
(48-72h after antibiotic initiation)			
Clinical events prior to surgery			
Systemic embolisms	9 (39.1%)	26 (35.1%)	0.76
CNS embolisms	5 (21.7%)	18 (24.3%)	0.77
Heart failure	11 (47.8%)	63 (85.1%)	<b>&lt;0.001</b>
Acute renal failure	12 (52.2%)	53 (71.6%)	<b>0.048</b>
Signs of persistent infection	5 (21.7%)	42 (56.7%)	<b>0.015</b>
Septic shock	3 (13.0%)	32 (43.2%)	<b>0.008</b>
Thrombocytopenia (<150000/mm <sup>3</sup> )	5 (21.7%)	34 (45.9%)	<b>0.036</b>
Reasons not to operate			
Patient rejected surgery	4 (17.4%)	2 (2.7%)	<b>0.012</b>
High surgical risk	19 (82.6%)	63 (85.1%)	<b>0.012</b>
Death before surgery was performed	0 (0%)	9 (12.2%)	<b>0.012</b>

Values are n (%) or mean [SD]. COPD: chronic obstructive pulmonary disease. LVEF: left ventricle ejection fraction.